

# AUTO-CALL

## Official journal of the Foundation For Amateur Radio

**June 1973**

ALEXANDRIA RADIO CLUB  
AMSAT—Radio Amateur Satellite Corp.  
BALTIMORE AMATEUR RADIO CLUB  
BOWIE AMATEUR RADIO CLUB  
CHESAPEAKE AMATEUR RADIO CLUB  
COLONIAL STATES AMATEUR RADIO CLUB  
DEPARTMENT OF STATE AMATEUR RADIO CLUB  
FORT BELVOIR AMATEUR RADIO CLUB  
FREDERICK AMATEUR RADIO CLUB  
FREE STATE AMATEUR RADIO CLUB  
FRIENDSHIP AMATEUR RADIO CLUB  
GODDARD AMATEUR RADIO CLUB  
GREEN MOUNTAIN [IN REPEA]  
ITCHYCOO PARK V  
MCLEAN AMATEU  
MARYLAND  
MARYL  
MARYLAND MO  
MONTGOMER  
VAL RESE  
RGINIA  
NTERN V  
OLD OLD-TIMERS CLUB  
OLE V  
VIA HAMS AMATEUR RADIO CLUB  
VALLEY RADIO CLUB  
WIRELESS ASSOCIATION  
ART  
S ASSN. (Washington Ch  
AR  
WIRELESS ASSN. (Baltimore Ch  
K AMATEUR RADIO ASSOCIATION  
SHENANDOAH VALLEY RADIO CLUB  
TWO METER TERMITE NET  
VIENNA WIRELESS SOCIETY  
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2012 Rockingham Street, McLean, Va. Phone 536-8469

## INFORMATION / HOSPITALITY COMMITTEE

The Information/Hospitality Committee provides a central clearing house for information regarding amateur radio activities in the area served by the Foundation. Special consideration is given to visiting foreign amateurs, and a volunteer staff of linguists is available. This Committee also provides a Widow's Assistance program to assist widows of local amateurs in evaluating and disposing of equipment. Chairman of the Committee is Bill Parrott, W4URL

8548 Georgetown Pike, McLean, Va. 22101  
Phone (703) 893-8383 between 8 a.m. and 8 p.m.

## LICENSE EXPIRATION NOTICE SERVICE

The License Expiration Notice Service will keep track of your license expiration date and remind you in advance. Note the expiration date on a self-addressed, stamped post-card and send it to Joan Machinchick - K3KBI

1023 Lake Claire Drive, RFD 4, Annapolis, Maryland 21401

AUTO-CALL is a member of the Amateur Radio News Service

# CALENDAR OF EVENTS

## JUNE 1973

1 Maryland Mobileers; Shenandoah Valley ARC  
3 Maryland FM Meeting at Goddard Space Flight Center  
4 BARC; Dept. of State; Free State ARC; PVRC - Va.  
5- 7 AFCEA CONVENTION - Washington, D.C.  
5 Prince Georges Wireless; Ham radio program WTGS FM  
6 Montgomery Amateur Radio Club meeting  
HUNTINGTON WEST VIRGINIA HAMFEST  
7 McLean ARA; Naval Research Laboratory ARC  
8 Alexandria RC; Rock Creek ARA; Vienna Wireless  
10 WAYLARC Picnic  
11 Bowie ARC; Chesapeake ARC  
12 Frederick ARC; Ham radio program on WTGS FM  
13 FOUNDATION FOR AMATEUR RADIO BOARD MEETING  
Woodbridge Wireless Society meeting  
14 Northern Virginia RC; Ft. Belvoir ARC  
15 Colonial States ARC; Maryland Mobileers; Shenandoah  
17-23 AMATEUR RADIO WEEK  
18 Baltimore ARC; Free State ARC; PVRC - Md.  
19 Two Meter Termites; Ham radio program on WTGS FM  
20 Goddard ARC; Montgomery ARC  
22 Alexandria RC; Rock Creek ARA; Vienna Wireless  
23-24 FIELD DAY  
25 Chesapeake ARC; Ole' Virginia Hams ARC  
26 Ham radio program on WTGS FM  
29 Friendship Amateur Radio Club meeting  
30 WEST VIRGINIA STATE CONVENTION - Jacksons Mill, W.Va.

## JULY

1 WEST VIRGINIA STATE CONVENTION - Jacksons Mill, W.Va.  
22 MEPN Picnic

## AUGUST

5 SHENANDOAH HAMFEST - Winchester, Virginia  
26 BLUEFIELD WEST VIRGINIA HAMFEST

## SEPTEMBER

2 SHELBY NORTH CAROLINA HAMFEST  
7 ROCK HILL SOUTH CAROLINA HAMFEST  
9 Maryland FM Meeting  
14-16 ROANOKE DIVISION CONVENTION  
15 HAMBURG INTERNATIONAL HAMFEST - Hamburg, New York

## OCTOBER

21 GAITHERSBURG HAMFEST

# Foundation For Amateur Radio, Inc.

Twenty-three Trustees representing 24 supporting clubs attended the May 9 meeting of the Foundation.

A letter from Ole' Virginia Hams Amateur Radio Club designated Ron Bruniger, K4FHN as representative, replacing WB4TEL.

Minutes were read from a meeting of the Executive Committee held on May 8. After some discussion, the minutes were approved and the Board voted unanimously to affirm the actions proposed. These actions included the following:

1. Increase the subscription rate of AUTO-CALL to \$2.50 to supporting club members and \$3.00 to non-members, effective 1 July. Current subscriptions remain unchanged until expiration.
2. To discontinue present "club subscriptions". All club subscriptions are to be entered for one full year, the full amount to accompany the order when entered.

President Turnbull discussed the need for a written set of "Guide Lines" outlining the policies and procedures which do not appear in the Constitution and By-Laws but which have been established in the past. Input from all members was invited.

Hamfest Committee chairman K4MM reported that the contract has been signed with the Gaithersburg Fairgrounds for the October 21 Hamfest. All costs are up and expenses for the Foundation will be considerably higher than in past years. However, it is not intended that the entrance fee will be increased.

The creation of a Historian and Publicity Committee was suggested to obtain and coordinate publicity and to maintain a scrap book of items pertinent to the Foundation in particular and ham radio in general. After some discussion Bill Moran, W4MIB offered to take on the scrap book. All members are urged to submit material for past, present and future items which might be included. W4MIB's address is Bill Moran,

109 Mill Street N.E.  
Vienna, Va. 22180  
Phone 938-6924.

The need for better coordination of local activities was mentioned. K4LMB said this was the major purpose of the Calendar of Events in the AUTO-CALL. Major activities will be listed months in advance - IF - the information is brought to her attention.

Items of general interest were discussed. The Alexandria Radio Club was commended for its work in providing communications for the canoe and shell races and many other activities.

The meeting was adjourned at 9:20 p.m.

Ethel Smith, Secretary

# FCC ACTIVITY

By Bill Grenfell, W4GF

A letter in a recent issue of an amateur magazine by a presumably intelligent ham, who writes that he is a federal officer, displays a shocking lack of understanding of the make-up, the work priorities and other functions of the FCC - related to the Amateur and Citizens Radio Services. Unfortunately, it appears that some such lack of understanding prevails to a significant degree on the part of some of the Directors and Officers of the ARRL.

The ARRL Board's January 18, 1973 resolution <sup>1</sup> sounds off to the effect that individuals and clubs "....have expressed deep concern over the apparent trend toward progressively restrictive and unilaterally-imposed regulations....and the potential inhibiting effect upon the orderly development of the (Amateur Radio) Service..." It is interesting to note that at the same time, an editorial was being printed pointing out the daily occurrence of violations of the power, broadcasting, obscenity, profanity, false signals, unidentified communications and malicious interference limitations and prohibitions in the rules and calling "...for amateurs to engage in some re-appraisal of their operating procedures and tactics before FCC does it for them." <sup>2</sup> The Board went on to resolve that "....the President and the General Manager are directed to undertake a vigorous program to seek reasonable and technically viable philosophies of regulations and interpretation, conferring at all necessary levels with appropriate Government departments and officials...."

In my opinion, the Board's resolution was unwise and, to a great degree, an emotional overreaction to complaints about new rules and interpretations before an adequate trial time had passed to see how they would work in actual practice. If the Board hoped that the resolution would cause the Commission to rescind or dilute the recently adopted rule amendments and interpretations about which they complain, I can assure them they wasted their time and ink. If anything, their resolution has added difficulty to the accomplishment of the very task assigned to the President and the General Manager in the last paragraph of the resolution.

If the Board's resolution is not aimed at a public challenge of the Commission's manner of application of its authority, or is not just hot air designed to mollify the complaining members, then the only remaining purpose served would appear to be to tell the President and General Manager to exercise more vigor <sup>3</sup> in pursuing a "program" for which they were already responsible. Whatever the purpose (perhaps a mixture of several possibilities) the public pronouncement certainly did not "win friends and influence people" in Washington.

Continued on page 7)

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<sup>1</sup> QST, March 1973, page 11, minute 20, page 89.

<sup>2</sup> CQ, February 1973, page 5

<sup>3</sup> CQ, May 1973, page 5

## FCC Activity - Continued

Unfortunately, the General Manager's editorial <sup>4</sup> concerning the Resolution did nothing, to say the least, to help the situation. The League president's speech to the Washington Chapter of the QCWA <sup>5</sup> served no purpose other than directing more attention to an unhappy situation which requires a really constructive approach, not more publicity.

Lest I be misunderstood, let me emphatically state that I too find objection to some of the rule amendments and interpretations adopted by the Commission, particularly in regard to certain overly severe and overly complicated technical repeater requirements and the inadequate expansion of the 75 and 20 meter 'phone bands. I think the "suggestion" of a new call sign system that would probably require call sign changes for many of us is completely unnecessary and therefore unjustifiable, and does damage to the Amateur and Citizens Division's image. However, in contrast, there is absolutely no indication that the ridiculous 20 kw CW power "suggestion" came from the Division.

It was with considerable reluctance that I decided to write this. I had the feeling that too much has already been said and written, and not enough done. However, I hope that I have presented here some important, pertinent factors and views not heretofore presented on the matter.

I understand the League President and the Commission's Chairman have recently completed an exchange of correspondence on this matter. I hope it will clear the way for the re-establishment of communication between the League Board and Officers and the Commission at Amateur and Citizens Division staff level where it belongs. There is no doubt that there is fault on both sides in this situation. I am sure that if the persons involved can give a little, they can agree to compromise solutions to each problem and thereby make further progress toward an undisputedly common goal - a better Amateur Radio Service.

Finally, I recommend a great increase in the person-to-person contact between the FCC Amateur and Citizens Division staff and the ARRL Officers and the Board Members. I believe this whole situation would never have developed if there had been better communication.

- Gf -

<sup>4</sup> March 1973 QST, page 9

<sup>5</sup> May 1973 QST, page 59

<sup>6</sup> Letter to Editor, May 1973 CQ, page 7 from W6UF.

\* \* \* \* \*

The views expressed by W4GF are personal and do not necessarily reflect the opinions of the members of the AUTO-CALL staff or the members of the Foundation. Any responses should be directed to the writer.

# ARRL REPORT

ARRL's executive committee instructed the General Counsel to request an extension of 60 days for filing of comment on FCC's latest Docket 19723, to enable QST and other publications enough time to disseminate the notice to the amateur fraternity. Docket 19723, which concerns an evaluation of the Radio Amateur Civil Emergency Service, was released by FCC on April 20 and requires that comments be filed on or before July 1, 1973.

A number of additional interpretations of the new repeater-regulations have been made and FCC has issued a set of supplementary information sheets covering various aspects of applications for repeater licenses. Extra copies of these may be obtained from ARRL Headquarters upon request.

ARRL Life Members were victims of a computer gremlin, with a little help from the post office. On the first run through, the computer failed to print April labels for QST for the Life Members; when this was discovered separate labels were hurriedly supplied to the printer. Then the post office mislaid the shipment of several thousand QSTs somewhere between Concord, N.H., and Boston for about three weeks. It was all straightened out in time for the May issue, however, and some members report receiving both the April and May issue in the same week!

Fourteen countries were represented at the Region 2 International Amateur Radio Union conference held in Santiago, Chile, last month. Discussion items included preparations for the next World Administrative Radio Conference and strengthening of the IARU organization. ARRL President Harry Dannals was elected vice president of the Region 2 IARU executive committee.

QST Managing Editor Dunkerley and Public Relations Consultant Waters recently spent four days in Little Rock, Arkansas to take part in a three-week pilot NASA community educational program. Involvement of amateur radio was in the form of using demonstrations of amateur satellite communications as a teaching aid in the space sciences.

ARRL's General Counsel Booth reports a large number of recent antenna tower cases throughout the country and urges that amateurs be alert to impending local regulation changes that might curtail existing freedoms to erect towers and antennas. There have been no recent developments in connection with FCC's Docket 19555, which seeks to impose federal control of antenna heights under the guise of environmental protection.

General Counsel Booth seeks additional information on amateur activities in and utilization of the 220 MHz band. Amateurs having knowledge of such activities are urged to communicate this to W3SP, 1302 18th Street, N.W., Wash. D.C.

# FOUNDATION SCHOLARSHIPS

## Competition Announced

The Foundation for Amateur Radio announces its intent to award three scholarships for the academic year 1973-1974.

All amateurs, wherever resident in the U.S. and holding an FCC license of at least general class, can compete for one or more of the awards if they are now enrolled or have been accepted for enrollment in a full-time course of studies beyond high school.

### JOHN W. GORE SCHOLARSHIP

The John W. Gore Scholarship pays \$500. Applicants must intend to pursue a career in electronics or a related science and have completed at least one year in an accredited college or university. Preference will be given to residents of the District of Columbia, Maryland and Northern Virginia. Recent award winners are WA7BIP, WB2TCZ/3, and WB6UFT.

### RICHARD G. CHICHESTER SCHOLARSHIP

The Richard G. Chichester Scholarship pays \$250. Applicants must be a member of the ARRL and be sponsored by an ARRL - affiliated club. There is no restriction on the course of study, but applicants must be enrolled in or have been accepted by an accredited university, college or technical school. Preference will be given to residents of Ohio, Kentucky, Indiana, Illinois, the District of Columbia, Maryland and Northern Virginia.

### FAR TECHNICAL SCHOLARSHIP

The FAR Technical Scholarship pays \$200. Applicants must have been accepted or enrolled in an accredited technical school. Area preference is the same as the John Gore Scholarship.

Application forms can be requested from the Chairman, Scholarship Committee, Foundation For Amateur Radio, 8101 Hampden Lane, Bethesda, Maryland 20014. Requests must be postmarked prior to June 1, 1973.

The John Gore Scholarship has been awarded annually since 1961. It was established in honor of John W. Gore, then W3PRL, who was at the time of his death in 1960 the President of the Foundation for Amateur Radio.

The Chichester Scholarship is being offered this year for the first time. The fund has been established by Jack R. Chichester, W9AMF of Elwood, Illinois in honor of his father.

The Foundation for Amateur Radio, Inc., is a non-profit organization with headquarters in Washington, D.C. It is devoted exclusively to promoting the interest of amateur radio and to scientific, literary and educational pursuits that advance the purposes of amateur radio.

# AMATEUR RADIO WEEK PROCLAIMED

Throughout the country, AMATEUR RADIO WEEK is being proclaimed by Governors of many states. Governor Marvin Mandel of Maryland has issued the following proclamation:

## Amateur Radio Week June 17-23, 1973

WHEREAS, The thousands of amateur radio operators in Maryland have demonstrated time and again their orientation to public service; and

WHEREAS, These operators, living in urban and rural areas throughout the State, are prepared to give their time and the use of their equipment in helping others to communicate with one another; and

WHEREAS, These volunteers willingly furnish vital communications services in time of natural disaster and other emergencies; and

WHEREAS, It is fitting that Marylanders recognize the important contributions of amateur radio operators to our State:

NOW, THEREFORE, I, MARVIN MANDEL, Governor of the State of Maryland, do hereby proclaim the week of June 17-23, as

AMATEUR RADIO WEEK  
in Maryland, and I commend this observance to all our citizens.

GIVEN Under My Hand and the Great Seal of the State of Maryland, in the City of Annapolis, this 24th Day of April, in the Year of Our Lord, One Thousand Nine Hundred Seventy-Three.

By the Governor

(Sig) Marvin Mandel

## SILENT KEYS *Chas. Worsley - W3TYJ*

Once again we have lost a very active amateur. Charles C. Worsley, W3TYJ was an active member of the Rock Creek Radio Association and well known throughout the area. He will be missed by many. We pass our condolences to his family.

# Washington Area FM News & Views

R. Gary Hendrickson, W3DTN

## NORTH CAROLINA REPEATER LIST

I have recently been asked if I could provide information about repeaters in the surrounding states. Therefore, I will try to add such a listing, state by state, in various future columns. For those of you that travel a lot, the ARRL is currently compiling an updated version of its Repeater Directory, which should be off the press by summer vacation time. Most likely it will be free - only the cost of a SASE to ARRL Hq.

By popular demand, here is a listing of repeaters in the North Carolina area, as supplied by the North Carolina FM Repeater Assn., Inc., a very dynamic association of all the repeater groups in that state. It is similar to the Mid-Atlantic Repeater Council (T-MARC) in this area.

<u>LOCATION</u>	<u>CALL</u>	<u>FREQ.</u>	<u>In/Out</u>
Ashville	WA4NUO	146.22/	.82
Beaulaville	WA4UMH	146.34/	.94
Chapel Hill	WB4QFZ	146.22/	.82
Charlotte	WB4FB	146.34/	.94
Charlotte	W4YYF	146.22/	.82
Charlotte	WA4IPQ	146.16/	.76
Danville, Va.	WB4QEP	146.28/	.88
Durham	WB4QFT	149.10/	444.10
Fayetteville	W4EHF	146.31/	.91
Elizabeth City	WA4VTX	146.28/	.88
Gastonia	WB4KLB	146.37/	.97
Greensboro	K4CJZ	146.16/	.76
Grifton	WB4NBR	146.16/	.76
Hampton, Va.	WB4KNU	146.34/	.94
Hendersonville	WB4YAO	146.04/	.64
High Point	K4VUG	146.34/	.94
Lenoir	WB4QGC	146.25/	.85
Lexington	W4PAR	146.31/	.91
Mt. Airy	WA4ZAS	146.37/	.97
Mt. Pisgah	WA4BVW	146.16/	.76
Raleigh	K4ITL	146.28/	.88
Raleigh	WA4ZNA	146.04/	.64
Roaring Gap	WB4PPS	146.22/	.82
Salisbury	WR4AAA	146.28/	.88
Selby	W4NYR	146.28/	.88
Wilmington	WA4ZAT	146.22/	.82
Winston-Salem	WB4QGE	146.04/	.64

I hope this will be useful to someone.

73,

Gary, W3DTN

## HAM RADIO PUBLICITY

In coordination with Amateur Radio Week, WGTS-FM will present a series of programs about Amateur Radio. Scheduled for 6:30 p.m. on each Tuesday night during the month of June, the programs will be conducted by Robb Mapou, WA3QDH as follows:

June 5 - AMATEUR RADIO AND ITS HISTORY, featuring W4ZM, Ed Redington, who has been in amateur radio since 1915. The program is designed to introduce the public to Amateur Radio - what is is and how it all began.

June 12 - WHAT GOES ON ON THE AIR, featuring the "Nights of the Round Table" radio club. Guests will discuss Rag Chewing, DX work and Contesting and try to explain why amateurs get so turned on while on the air.

June 19 - THE ODDITIES IN AMATEUR RADIO, covering such subjects as OSCAR, SSTV, RTTY. Special guest will be Jan King, W3GEY of the AMSAT Corporation.

June 26 - PUBLIC SERVICE, featuring among others, K3LFD, John Munholland, Maryland Section Emergency Coordinator. This program will inform the public how amateur radio can and does serve them.

The programs are aimed at the general public rather than hams specifically. If much interest is shown, there is the possibility of a continuing series. Be sure to tune in. And tell your friends and neighbors to listen.

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### NORTHERN VIRGINIA METROPOLITAN AREA FIELD DAY CONTEST SPONSORED BY ARCADE ELECTRONICS

This contest is open to any bonafide amateur radio club based in the state of Virginia and within a radius of 25 miles of Annandale, Virginia.

The purpose of the contest is to stimulate interest in the ARRL Field Day among clubs in the Northern Virginia metropolitan area.

The basic award, donated by Arcade Electronics (Dick Jordan, W4UM and Vern Mann, WA4EJH) will be a suitable engraved plaque which will remain in the custody of the winning club for a period of one year. This plaque will become the permanent property of any club that may win three consecutive years. In addition, a smaller plaque will be presented to the winning club each year for their permanent retention.

At a recent meeting of representatives of most of the eligible clubs, it was decided that the winner would be determined by dividing the official point score (as listed in QST) by the transmitter class.

For further information, call Bill McKean, WA4DXO at 573-5120 or Arcade Electronics at 256-4610.

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# ALEXANDRIA RADIO CLUB

Meetings: 2nd and 4th Fridays, 8:00 p.m.

Club Station W4HFH, Red Cross Chapter House  
401 Duke Street, Alexandria, Virginia

For Information: Call Vince Gambino, WB4QJO at 971-4806

Preparations for "Field Day '73" are under way with planning antennas, getting the old generator fired up and fixing transmitters for their final - final test under the usual worst weather conditions afield. Several ops will be returning from college life and we hope they will join our Field Day parade at the green palacade.

The Comsat International Control Center has asked the ARC members to visit their operations as our May 25 meeting program. Members will meet at the Red Cross chapter house and depart as a caravan so as to arrive at the control center at 8 p.m.

Jim K4BAV visited the Jet Propulsion Lab at Pasadena. Bill has a new 35 mm camera. K4DHB has a new Assistant EC certificate.

Your corresponding secretary wishes each of you a good QSO every day.

73,

Lynn Wilson, K4DHB

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## HAM RADIO DISPLAY WINS BOY SCOUT HONORS

Ham Radio was the subject of a display put on by Boy Scout Troop 1532, Annandale, during the Boy Scout Exposition at Manassas, Virginia, on May 12. Judging by the number of people who crowded around the display all day and the number of serious questions that were asked, the demonstration was a real success.

Directed by Steve Floyd, WN4YHD; Phil Goetz, WN4HYC, and Bob Burton, WB4SPZ: the troop demonstrated all phases of Ham Radio from DX, Home Brew, Rag Chewing and Auto Patch through Public Service. They had five receivers on different bands, phone and CW, and operated W4PAY on 2 Meters. They passed out hundreds of the fliers "Ham Radio, 'The Greatest Hobby In the World.'"

The obvious thought and effort put into the display won Troop 1532 the first place award for the Exposition.

Congratulations to the group for a very worthwhile effort and a fine public relations job for amateur radio. We will be looking forward to seeing many new boy scout hams in the area.

# BALTIMORE AMATEUR RADIO CLUB

Meetings: 1st Monday of each month, Business meeting 8:00 p.m.

3rd Monday of each month, Social meeting 7:30 p.m.

Red Cross Building; 2220 St. Paul Street; Baltimore

Repeater frequency: 07/67 - WA3SFI

On-the-Air: 2nd and 4th Mondays at 8:00 p.m. 28.8 MHz

Training Classes: Call Bob Lautenberger, W3HYY at 377-9114.

During the month of April, BARC began to make plans for Field Day at Brown's Memorial Park. Bob, W3HYY, chairman, and Fran, WA3GYW, co-chairman, are checking the antennas and other equipment for any possible repairs. A schedule for the operators and loggers will be set up at a later date.

Improvements are being made on BARC repeater. A new antenna and a hard line should be installed by now along with other improvements.

A training class for novices and technicians to get a general class ticket will start at 7:30 p.m. May 16 at the Red Cross Building, St. Paul and 23rd Streets. This class will run for six weeks.

For membership on phone-patching .07/.67, write BARC, P.O. Box 1864; Baltimore, Md. 21203.

73, Jim, WA3RBQ

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## WORLD'S MOST POWERFUL VHF TRANSMITTING STATION

A million watts of RF energy in the CW mode is transmitted on 216 MHz through an antenna two miles long to produce an effective radiated power of 13.6 billion watts. This is the story of a space surveillance station at Lake Kickapoo, Texas, which was designed and developed under the supervision of one of our active, local hams, Lou Breetz, W3LB, as Head of the Transmitter Section of the Space Surveillance Branch of the Naval Research Laboratory, Washington, D.C.

This station is the central illuminator of earth orbiting objects for a surveillance system extending across the southern U.S. in a great circle from near San Diego, California, to Savannah, Georgia. Thousands of miles of illuminating range are furnished by this station in a fan shaped beam whose plane is in register with beam patterns of the other stations so that sufficient reflected energy from the space objects can be detected by receiving stations on each side of this transmitter.

The antenna of this station consists of 2556 parallel dipole elements mounted over a 12 foot wide ground plane. The antenna is divided into eighteen sections or bays with each bay fed by an individual 50 kW amplifier. The transmission lines are nominal 6.125 inch diameter coax, made of aluminum outer conductor and copper inner conductor. Estimated primary power consumed is about 2.2 MW. Tube filaments alone consume about 100,000 watts. That's BIG! (EASCON RECORD - Via NRL)

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# DEPARTMENT OF STATE Amateur Radio Club

Meetings: First working Monday of every month, 12:00 Noon  
State Annex 2, Room 802½, 515 22nd Street N.W.  
Washington, D.C.

Attendance limited to employees of Department of State and  
associated organizations AID, USAID, VOA.

For Information: Dexter Anderson, K3KWF 547-2555 / 632-9375

## ATTENTION!

Monthly club meeting for June is to be held at prospective  
Field Day site on The Mall, southeast of intersection of  
21st Street and Constitution Avenue, N.W. In case of rain,  
club shack, Room 802½. Monday, 4 June 1973, 12:00 noon.

The next-to-last meeting before ARRL Field Day was held  
7 May. Saving the best til last, we proceeded first with  
the serious business of FD preparations, being coordinated  
again this year by Bryan Cordray, WA4SPI. A shot in the arm  
was provided by Bill Jochimsen, W3UV, who announced he will  
operate from W3DOS/3 this year, replete with his own mobile-  
borne rig.

Field Day and other "normal" business behind us, we turned  
the meeting over to guests of honor John "Chester" Lunsford,  
W4EVG and trustee of XV5AC, and Frank T. Ostrich, WB4UZP.  
Both participated in the effort to reach Spratly, in the  
South China Sea, for the famous 1SLA expedition. A mouth-  
watering description was given of the XV5AC operation out of  
Saigon (what an antenna farm!), and a hair-raising account  
followed of the repeated attempts to reach Spratly, in rough  
sea and a leaky vessel! Hamdom owes a responding "TNX" to  
the group that put their own time, resources, and, yes,  
personal safety, on the line to mount the Spratly effort.  
There is talk of other exotic locations, land-locked this  
time, for possible future DX feats.

Hope to see you and/or work you during Field Day! W3DOS/3  
still won't win any prizes (we still plan to locate on the  
"PR Mountain" in the  
"RF Hole!") but we will  
try to improve sharply  
over last year's showing.

73,  
Dex, K3KWF

\* \* \* \* \*

This is the rig at  
XV5AC. Clocks show  
Saigon time (left) and  
GMT (right).

(Courtesy of W4EVG)



June 1973

AUTO-CALL

Page 15

# FRIENDSHIP AMATEUR RADIO CLUB

Meetings: Last Friday of each month 8:00 p.m.

Members' homes. Meeting notices are mailed in advance  
On-the-air meeting: Cracker Barrel Net every Monday 9 p.m. 28,650  
For Information: Call Maynard Briggs, W3HWZ at 465-0593

The March meeting of the Friendship ARC met at the home of Ed Yoder, W3YMB. In the absence of the president, K3AW, Frank Rutter and the Secretary, Cleo, K3IYJ, business was conducted by the vice-president, Gene Knapp and things went along as usual. The meeting was open for general discussion. W3WK, Lou Goetz is going to look into procuring surplus test equipment at a reasonable price and how to go about obtaining it in bulk lots. The club will then be in on the bidders list.

W3KDD, Dave is looking into procuring new QSL cards. W3WK, Lou Goetz, is Field Day chairman and needs help in getting prepared with equipment and location. The QCWA Baltimore chapter dinner is May 26 at the Quality Court Motel at Baltimore Beltway. The speaker is Hugh Turnbull, W3ABC with the subject his operational trip to Galapagos Islands.

The basic discussion for this meeting turned into club projects. Discussion followed these:

RF Preamplifiers - Don Kichen, K3SVC  
Automatic Keyer - Gene Knapp, W3BAB  
RF Speech clippers - Dave McClelland, W3KDD

The April meeting was held at the home of Frank Rutter, K3AW. This meeting had much discussion concerning Field Day. Things are moving; the equipment list was expanded, the location will be at the John Johnson farm - W3DO. All members are requested to be prepared for job assignments at the May meeting.

Ed Yoder suggested we have a visit to NRL and have it arranged since NRL is in its 50th year. Ernie Farkas, K3CBW and Dave McClelland paid a visit to Charlie Hartman, W3GR. A pleasant time was expressed and the club will add a project to keep up visits and aid Charlie in any ham activities in the near future.

In a closing note it was announced that the State of Maryland is having an Amateur Radio Week as proclaimed by Governor Marvin Mandel, observed during June 13 to 23, 1973. This will be a start of Field Day. We all should talk up this observance.

The next meeting will be at the home of Maynard Briggs, W3HWZ on May 25.

Still need news notes to give you.

73,

C.N. Bushey, K3IYJ  
Secretary

# ITCHYCOO PARK

## VHF Amateur Radio Society

P.O. Box 1062 - Hagerstown, Md. 21740

Greetings from Mt. Quirauk. Activity is brewing again from the hilltop.

First off, the official results of the 1973 Worldwide VHF Activity are now in. Top ten scores on six meters were accredited to WA3LNH/3, K1ZKR, WA3PNW, WB2MTU, W3CL, K1SFF, WB8KAY, WA3JMM, WA2QPC, and WA2QVN.

The top ten stations on two meters were W8GIO, K1SFF, K3ZSG, W3EIF, WA3LNW, WA20AF, W3CL, W3ETB, WA3PTV, and WA3NGK.

The top five clubs participating were the Mt. Airy Pack Rats, the Mobile Sixers, the Space Net, the Antietam Radio Association and the CHC.

The Worldwide VHF Activity has announced the dates for the 1974 activity. March 9 and 10 have been selected. The activity will run from 3 p.m. local on the 9th to 10 p.m. local on the tenth. The 1974 contest will include all contacts made on six, two and 1-1/4 meters. Other general rules will remain the same as the activity held this year.

The Activity Committee was generally happy with this year's test. Well over 100 logs were received. That's more than double last year's entries.

Other club news: We have been negotiating with the Potomac Area VHF Society and it looks like we will let them operate from Mt. Quirauk for the June VHF QSO Party. Probably it will be a joint contest effort with Potomac VHFers supplying the rigs and our club supplying the 2-meter antennas, 432 antennas, shelter and general location. Both clubs will probably supply operators. We have promises of high power rigs on six and two. It will be the first time that more than 120 watts on any ham band will have been used from the Mountain.

Also, we have gotten 22 of our elements back in the air on two meters and there is a possibility that all 44 elements will be operational before the end of summer.

The Society recently held elections for new officers. Results? WA3EOP President, WA3EOQ Vice President, WN3TUD Secretary, and WA3FYZ will assume the station license trusteeship after the June VHF QSO Party. The station will continue to hold advance class license privileges.

Well, that's all to report for now. C U on VHF during the VHF QSO Party and perhaps during Field Day.

# MARYLAND EMERGENCY PHONE NET

On-the-air: Mon., Wed., Fri., 6 p.m. Sat., Sun., 1 p.m. 3920 KHz  
For Information: call Maynard Briggs, W3HWZ at 564-0597

Net activity picked up during April, with an average of 26.7 stations checking in per drill. Member stations reporting in were 394, with 168 non-members, for a total of 562. The net held 21 sessions. Formal messages totaled 90, with 83 informals. The toppers list was impressive, with W3ADQ, WA3IIV, W3JQN and W3LDD making 100%. Others were W3DKX, W3FCS and K3VQO, batting 86%.

The latest roll call sheet now shows 44 stations as MEPN members. We can use more, particularly on the Eastern Shore. Let Walt, W3LDD know if you have any prospects.

Hope you have a good time on Field Day, and that we don't have any hurricanes this time. Also start planning for the MEPN picnic, which comes up on July 22 at the McKeldin Area, Patapsco Park.

73,

Maynard, W3HWZ



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## MARYLAND FM ASSOCIATION

Next Meeting: Sunday June 3 - At Goddard Space Flight Center  
Greenbelt, Maryland

For membership information write James G. Card, K3VJH/3  
P.O. Box 495, Silver Spring, Maryland

Activities at meeting to be announced in MFMA News letter to  
be mailed about one week in advance of meeting.

TWO YEARS. This column marks the 24th consecutive time I have submitted these monthly ramblings to AUTO-CALL. I have tried to keep the column from becoming just another "CLUB" who did what blurb, the attempt has been to make it an FM news column with how to do it tips, etc. Anyone who has followed this column will have noticed I prefer the commercial surplus gear that requires you to do some work yourself in order to get on-the-air. The little rigs sold over the counter for HAM FM are, I am sure, good buys in most cases; but one just does not get the same kick in using such a rig as from converting a retired police or taxi cab radio to Amateur FM. I have been the whole route from boat anchor to HT220 and covered most of my experiences here. Also, we reviewed such popular innovations to the 2-meter FM Ham market as the GLB channelizer - wonder if anyone ever thought the GLB doesn't have to be used for FM alone?

MANY CHANGES. Two years ago there was only one 2-meter repeater in the area 34/76 - remember? I bet most of you don't, because you were not even aware there was such a thing as 2-meter FM, had never heard of a repeater and if you had thought the range was limited, 2-meter FM a passing fad and of no interest.

HOW TIMES HAVE CHANGED. Every 30 kHz from 146.61 to 146.97 except 146.94 (and Hagerstown has one there I have worked through) is the output of a repeater in this area. They may not all be on-the-air at any one given time but most are. That's 12 repeaters in that segment of 2-meters alone, also there are several on other bands - 6 meters and "450". There is even some 220 MHz FM activity with converted "Proglines," etc. Heard at the Dayton Hamfest that Clegg plans a 220 repeater as well as some other manufacturers. This irks us commercial purists, but there is no surplus market to draw from in this area.

FCC made new rules just for Repeaters. Some we like, some we don't, or more properly the interpretation being put on them. At least they keep every Tom, Dick and Sam from throwing up any old thing as a repeater. The new mobile and repeater logging is great.

Just had to ramble this month - won't be out of town this meeting so see you there.

73,

Joe Handley, K3LL

# MARYLAND MOBILEERS

Meetings: First Friday of each month 8:00 p.m.

Anne Arundel Community College

Arnold, Maryland

On-the-Air: Mondays and Thursdays 9:00 p.m.

Club Repeater WA3PJQ - 146.10/.70

For Information: Call Larry Sheets, WA8FTK/3 at 969-2053

The Maryland Mobileers were treated to a matter of great importance at the last meeting. When Maryland Governor, Marvin Mandel, found that he could not present his recent proclamation of "Amateur Radio Week" in person, he delegated the job to Doris Denmstaedt, WA3HEN, who gave it to Karl Medrow, W3FA, representing the Maryland Amateurs. Amateur Radio Week, June 17-23, 1973, is to be observed nation wide, in honor of radio amateurs' dedication to public service, emergency communication and other helpful community endeavors involving communication. Our Field Day demonstration terminates the week's observance. We are pleased to note that our governor has made this annual event an official observance in our state.

A practical discussion of a method of counting frequency down to 1 Hz, at frequencies from 3.5 to 150 MHz, with easily obtained ham equipment, was given by Jeff Walker, K3WIK at the May 4 meeting.

73, Larry Sheets, WA8FTK/3

## WALLER ELECTRONICS

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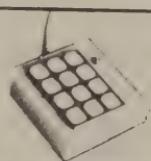
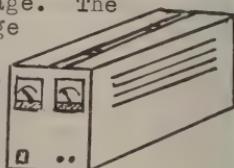
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# MONTGOMERY AMATEUR RADIO CLUB

Meetings: 1st and 3rd Wednesdays, 8:00 p.m.

Suburban Trust Building, Gaithersburg, Maryland

Mailing Address: P.O. Box 611, Gaithersburg, Md. 20760

Repeater: 146/04/146.64 - WA3EWJ "Open Repeater"

For Information: Call Craig Kendall, WA3RGH at 424-7539

The Montgomery Amateur Radio Club is moving its meeting place. Beginning with the June 6 meeting, we will meet in the basement of the Suburban Trust Building, located on Frederick Avenue in Gaithersburg. The club wishes to thank Montgomery Village for their generosity in letting us use their party room.

The club's repeater is once again up and on the air. Presently the repeater is not crowded, so there is a lot of rag-chewing going on among the club members.

On May 2 the club had a very unusual and interesting presentation. George Ellerton from Victro spoke to us about his experiences in working with balloon satellites. Films and slides were shown of the satellites. Thank you Mr. Ellerton for a very interesting evening.

## "OTHER HOT NEWS"

Congratulations to Bill Price, WA3NYF, who won 4th prize at the Westminster hamfest. Bill won a 5/8 2-meter whip for his car. Now all he needs is a 2 meter rig to go with it.

Chuck Davidson, WA3LXB; Richard Krinsky, WA3OXL; and Craig Kendall, WA3RGH, are finally on 2 meters. After waiting 7 anxious weeks, their TR-22s finally came.

73,

Craig Kendall, WA3RGH

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There ought to be a better way to start the day than by getting up in the morning.



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# MCLEAN AMATEUR RADIO ASSN.



Meetings: 1st Thursday of each month, 8:00 p.m.  
Dolley Madison Library  
1244 Oak Ridge Road, McLean, Va.

Training classes: Call Ralph Lee, WB4YUY at 821-2432

It's that time again when the end of school is near, vacations are being planned, and dreams of summer idleness fill our winter weary heads. It's also the time of year when Field Day is readied for with amateur expertise. McARA will be participating for the first time in Field Day and we all hope this will be a big success.

Field Day Committee chairman Andy Tarasoff, WA4CGI, with Activities Director Bill Greene, WA4GHU, have just about finalized which one of two FD sites we will use. Hopefully, we will use an idle field near Cooper Intermediate School or a hilltop location close by the Department of Transportation grounds (near the C.I.A.) with easy access from Georgetown Pike. Either one will suffice as McARA, as usual, will make this a fine success. If you have some helpful ideas, or would like to lend a helping hand, or just need final details as FD approaches, call Andy at 356-7951 or Bill at 356-4368.

Our meeting on May 3 was presided over by V.P. Guy Blencoe, W4HVU. Business was held short with FD being the most important item. Virgil Harris, WB4NRG gave an excellent demonstration of the transmission and reception of thoughts through brain waves. Several club members assisted him.

Where has our president been??? Not exactly what we'd call R and R. As Ralph puts it, it was more of a overhaul and repair (helicopter jargon). With two operations within ten days, Ralph is now home and resting and gettin' at 'em again including some fine QSOs on the air. Ralph was really sorry that he had to miss the meeting, but he has some good plans coming up for the next few months.

The training classes have been meeting every Monday night except during Ralph's 10 day jaunt to the hospital. In the past month two Novices and 3 Generals have passed their tests. In the late summer, Ralph expects to turn the Novice and General classes over to a still badly needed volunteer. This is so that he can prepare the Extra Class lessons. Many well-known Ol' Timers from McARA, NVRC, etc., have expressed interest in such a program. If you already have an Extra Class and would like to help or contribute study materials, etc., or have questions about the classes, contact Ralph at 821-2432.

Plans are under way for a nice easy social event sometime this month. If things run smoothly the president and calling committee will be calling the membership to give out the information. A full course dinner with all the trimmings for less than \$4.50 is planned.

73, Chip, WB4ZVR

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# NAVAL RESEARCH LABORATORY

Meetings: First Thursday of the month at 11:45 a.m.  
Naval Research Laboratory,  
Washington, D.C. 20375

For Information: Contact C.E. Carson, W3KVC at 767-2595

Training Classes: Open to Club members, DOD and Navy Personnel  
Call John Knoerl, W4ZNS at home - 779-2246.

Mailing Address: Address all correspondence, etc. to  
Trustee, W3NKF; Code 9015  
Naval Research Laboratory, Washington D.C. 20375

CQ CQ Calling any amateur station - W3NKF's license has been renewed and we're back on the air! The log book shows that W3NKF has worked 11 different states, Panama and Costa Rica this past month. Chief operator was C.E. (Kit) Carson, W3KVC, using a Heathkit SB101 transceiver on 15-, 20-, and 40-meters. Notice has been given that we'll have the 50th Anniversary QSL cards to send around the middle of June.

At the May 3rd meeting, Station Manager, Bob Turner, K3BE, presented Harold Dickinson, WA3IGX, with a certificate of appreciation for his efforts which have greatly contributed to renovation of the station and putting W3NKF back on the air.

Educational chairman, John Knoerl, W4ZNS, announced that classes were going well and that an antenna seminar will be given the end of May and beginning of June by Dave Phillips, W3PJM. There will be 4 sessions dealing with elementary theory, practical applications, pattern measurements - VSWR, and advanced systems. Certificates will be issued for completion of all courses.

The Club adopted a Family Plan membership - \$3.00 for the chief member and \$1.00 annual dues for dependents. Several NRL families are presently participating in classes and other activities of the club.

Plans continued for NRL's "Salute to Area Amateur Operators" highlighting 50 years of Radio Research at NRL and for W3NKF's participation in Armed Forces Day cross-band communications, both on May 19, 1973. More will follow on these events next time.

73,  
Ruth, K3AGR

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FCC Attorney Richard H. Everett has been appointed Assistant Chief of the Amateur and Citizens Division of the Safety and Special Radio Services Bureau. His new position will include duties as Amateur and Citizens Radio Officer. A graduate of the Washington College of Law, Mr. Everett first joined the Commission in 1956 serving with the Law Enforcement Office. He has been active in policy and rule development matters in the Amateur and Citizens Division since January 1963.

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# NORTHERN VIRGINIA RADIO CLUB

Meetings: Second Thursday of each month, 8:00 p.m.  
Red Cross Building, 4117 Chain Bridge Road  
Fairfax, Virginia

For Information: Call Lee Mairs, WA2DFK/4 at 534-6871

The May meeting was held on Thursday, May 10, with more than 40 members and guests present. The program for this month was the planning of Field Day and the election of new officers. Anyone interested in helping out on Field Day is requested to call Wes, WB6TOP/4.

The new slate of officers for the coming year are as follows:

President: Bob Zaepfel, K4HZF  
Vice Pres: Steve Floyd, WN4YHD  
Secretary: Frank Spur, WN4YRB  
Treasurer: Bob Phillips, W5VZO/4  
Tfc. Mgr.: Wes Armstrong, WB6TOP/4

The Northern Virginia Radio Club was very active when the tornadoes hit this area a couple of months ago. W4PAY was net control on the local repeater frequency and had mobile stations out in the Red Cross ambulances serving as direct links with the Red Cross chapter house.

The club would like to thank the past slate of officers very much for their hard work in adding to another successful year for W4PAY. We would especially like to thank Lee Mairs, WA2DFK/4 for his hard work as president. Lee initiated the club's monthly raffle, helped start and did a lot of work with the clubs 2 meter project, and added much to the club in many other ways. We would also like to thank Don Parris, W4NSP, as vice president; Bill McKean, WA4DXO, as treasurer; and Bud Cone, WA4PBG, as traffic manager. I wish to thank all the people that helped me out as secretary and wish I could stay around for another year instead of heading off for college later this year.

I hope to see all of you at the next meeting, and hope that you will be able to help out with Field Day this year. We will be at the same site as last year (Vic Clark's, W4KFC, property in Clifton.) Also, don't forget the raffle next meeting!

73, Max, WB4UKA

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## TRINDADE ISLAND EXPEDITION

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WA3HRV and PYLDVG will operate from Trindade Island for a 48 hour period, commencing between June 8 and 13, 1973. The call signs will be FY/ZAA and FY/DVG - unless special prefixes can be obtained. The following transmitting frequencies will be used: CW - 1827, 3502, 3527, 7002, 7027, 14027, 21027, 28027.

SSB - 3797, 7097, 7197, 14197, 21297, 28527.

QSL via PYLDVG, P.O. Box 51-ZC-00, Rio de Janeiro, Brazil.

## OLE VIRGINIA HAMS

Meetings: 4th Monday, 8:00 p.m.

Town of Manassas Park Recreation Center  
Manassas Park, Virginia

For Information: Call Walt Short, WB4TBO at 361-7394

Of prime interest at the April 28 meeting was Field Day. Don, W4HJL (FD Chairman), appointed volunteers to various committee responsibilities. (Still looking for a cook who can make charcoal-broiled chicken taste like sirloin steak!)

The club station made its first contact last month with WA9OYL and the confirming QSL along with a pix of WA9OYL has been received.

A new twist was thrown in at the April meeting - we had a roundtable discussion with each member commenting on his latest projects, accomplishments or short circuits. The discussion proved to be a great idea as everyone was brought up to date with Ham problems and achievements.

We have been trying to get new "blood" into the club and are pleased to report that nine new members have joined since January. Also, the club started an informative monthly newsletter and so far has published two editions.

Ed Redington, W4ZM, will be "sparking" our May meeting. However, by the time you read this article the May meeting will be in the ozone stage.

73,

Ron, K4FHN

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### LASER COMMUNICATIONS

A unique laser, called a spin flip Raman laser is under development for use in more reliable and faster ship-to-ship communication systems. It uses an infrared beam that can be adjusted to a wide range of wavelengths by the mere flip of a knob.

This new laser project is under development at the Naval Electronics Laboratory Center, San Diego, Calif. A carbon monoxide gas laser provides an intense pump beam of infrared radiation which passes through a small semiconductor crystal in a variable magnetic field. The conduction electrons in the semiconductor take energy from the pump beam, leaving scattered radiation which is shifted to a lower frequency. The frequency shift depends upon the spin energy of the electrons, which in turn depends on the magnetic field strength. Thus by varying the field, the output frequency can be tuned. Under the right conditions, stimulated emission, or "lasing" takes place at the shifted frequency.

(Naval Communications Bulletin No. 126. Spring 1973 OPNAV)

## POTOMAC VALLEY RADIO CLUB

Meetings: 1st Mondays at Lanier Intermediat School, Fairfax, Va.  
3rd Mondays at Decatur Junior High School, Clinton, Md.  
For Information: Call Ed Redington, W4ZM at 941-1818

PVRC annual reunion contest is set for June 2 and 3. Traditionally this activity has brought the gang out in record numbers. Activity will be over the entire U.S. and the world. Here is your chance to renew friendships with fellow members who have left the Washington area. W3BWZ and WA3IAQ will be getting the mail-out ready soon.

Roanoke and Atlantic Division Directors, W4KFC and W3SW respectively deserve our "tnx" for the wonderful job they are doing. Connie alone drove over 16,000 miles in connection with his duties and Vic logged trips all over the Roanoke Division plus trips to the West Coast. Give these fellows your support and assistance when they call on you!

The PVRC info questionnaire mailed in April brings fair results. Those who are tardy, get them to me soon, as the anniversary booklet is being assembled shortly.

Charles Tido, K3EBY is welcomed as a new member.

Many PVRCers are working diligently with Stu, W3GHK/4 on the Roanoke Division Convention. If you have not done so, get your \$3 check to K4MD at Box 7388 in Warrenton for the registration and another \$12 if you plan to attend the banquet. The convention is shaping up nicely and promises to be first class in every respect. A recent tour of the Sheraton Inn at Reston reveals a great site with excellent facilities.

WBABC should be active from 5R8 land beginning in mid June. Hugh will be anxious to work his many friends in this area. His operation in HC land last summer was superb.

As warm weather approaches, now is the time to get busy on those antenna plans you made after the SS and DX contests. Several members report plans for big arrays, so pitch in and help when requested. K4GKD now is XV5BB, so listen for Dick.

73, Bud, W4YZC

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### AMATEUR RADIO FACILITIES AT AFCEA CONVENTION

On-the-air amateur radio facilities will be provided by the Chief of Naval Operations amateur radio station K4NAA during the Armed Forces Communications and Electronics Association (AFCEA) convention on June 5, 6 and 7.

Licensed amateurs throughout the world are invited to make contact during the AFCEA convention, and a specially designed QSL card will be sent to acknowledge all contacts.

# PRINCE GEORGES WIRELESS ASSN.

Meetings: 1st Tuesday of each month, 2000 hours local time  
Red Cross Service Building, Belcrest Road between  
Queens Chapel Road and Route 410 at the PG Plaza  
For Information: Call Ed Kennedy, W3GPI at 277-9259

Meeting - At the regularly scheduled meeting of the PGWA on May 1, the business meeting was conducted with dispatch by Vice President Ed Bruns, W3EKT (in the absence of the undersigned who was again in the sack with the miseries) and turned over to Rip Smith, WA3NQJ, who, by all accounts, detailed the intricacies of DXing and contesting in an excellent fashion. At next month's meeting, Fred Heutte, WA3QIA, will perform on the matter of traffic handling over League nets.

A-Saga - Jerry Peterson was once upon a time WN7ZYT back in 1955-56 in Richfield, Utah, but got diverted by women, song, etc., etc., plus engineering school which is indeed a diversion all by itself. However, he reverted to type last winter, enrolled in PGWA's School of Amateur Radio, struggled manfully with WLAW's code sessions with the help of an SX-100, and rammed straight through the Advanced Class.

This new dues-paying member promptly raided the bread box and ordered Bob Drake's newest, the TR-4C. Just as promptly, he got the power supply and c-w filter. The machine was back-ordered blankety-damned weeks. Jerry persists, however, buying a four-band Hustler vertical which he and Ed Kennedy, W3GPI, install on top of his apartment building on The Hill within eyeball distance of Barry's office. Next the ground rods go in - three of 'em - with the braid all nicely soldered and the bedroom gets rearranged so that the operating desk is exactly at the window. Earphones, mike, and a key are acquired. He buys DC post cards for interim QSLs and W9IOP's Second Op with all those exotic call districts pin-wheeled for quick preference.

So, there sits WA3URA as of this writing. Everything between the ether and ground except a machine.

And some wit at the office had gall enough to furnish phonetics: UTAH RIDES AGAIN.

Other Notes - Ed Kennedy is going mow-bile, having ordered Heath's latest . . . Robbie Mapou, WA3QDH, is enthusiastically following up on the display of old amateur gear at the Adelphi Library. . . Field Day is moving into final planning stages. Ed Bruns has the engine of the wagon pulled and torn to pieces. (In other words, "He ain't been too active.")

Gud DX es vy 73,

Ed Kennedy, W3GPI

---

The hardest thing in the world to open - is a closed mind.

# QUARTER CENTURY WIRELESS Assn. Washington Chapter



Next Meeting: Friday, June 1 8:00 p.m.  
Perpetual Building  
7401 Wisconsin Avenue  
Bethesda, Maryland

## ANOTHER LIGHTNING HAZARD -- THE ROTOR CABLE

From S.P.A.R.C. - G.A.P.  
St. Petersburg, Florida

So you feel safe after you have disconnected or grounded the antenna feed line? Not necessarily! If you have a rotatable beam or quad, there is usually an 8 or 4 wire cable connecting the rotor mechanism with the rotor control box. This cable leads down the mast or tower into the control or operating room. Unless there is some form of disconnect between this cable and the rotor control box, part (usually too much) of the lightning surge at the antenna or tower will find its way into this cable. Very often this cable runs parallel with the coax used as an antenna feed or transmission line. This enhances the chance of capacitive pickup from the braid of the coax, since the rotor cable is usually unshielded.

In a recent case, nature added to a July 4th local fire-works display by lightning which struck the upper tip of a fibreglass quad spreader holding the 20 meter fed element of a quad at K4NE. The last six inches of the spreader disappeared, leaving a "puff-ball" of fibreglass resembling a feather duster or cotton ice-cream cone such as one finds at carnivals. The eyebolt holding the antenna wire was unharmed but dropped down since its support was lost. There was no damage to the antenna or coax transmission line.

All the antenna feeds were disconnected and grounded outside the shack. Yet the lightning surge entered the house thru the rotor cable, burned out the CIR control box, entered the strip-line 120 volt a.c. connection strip thru the control box a.c. cord, passed into the receiver and exciter which had their a.c. cords plugged into the stripline, and caused considerable damage to the receiver and exciter. Some of this could have been avoided had the a.c. cords been disconnected. But the best preventive measure would have been to disconnect the rotor cable.

There is an eight-pin Jones plug disconnect in the rotor cable outside the shack now which can be connected to a grounding plug, all eight connections strapped together and wired to a ground rod. Truly a few ounces of prevention are worth a few pounds of replacement parts!

de K4NE

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# ROCK CREEK AMATEUR RADIO ASSN.

Meetings: 2nd and 4th Fridays, 8:00 p.m.  
Perpetual Building, 8700 Georgia Avenue  
Silver Spring, Maryland

On-the-Air: Every Tuesday at 9:00 p.m. on 146.52 MHz  
For Information: Call Carl Brown - W3LUL, Net Control

The new year for our club is upon us. With the official installation of officers for the current year at the dinner meeting, we approach the new year with a well rounded group of individuals.

For your President, Bill Jochimsen, W3UV, alias Ultraviolet and soon to be a contender for a future ladies night with photos of the trips he is planning for this year.

For Senior Vice President, yours truly, WA3LPG, alias Liquified Petroleum Gas, known in circles as the brave house builder.

Junior Vice President, Leo Scott, W3QDI who recently retired from NBS and has been a great help as our first aid man for our Field Day sights.

Secretary, Jay Heller, WN3SXH soon to drop the N between cramming for exams and being a bookworm for these many reports and assignments. Jay is a new member of our group and doesn't know many of the members by name yet, so your help and understanding will be appreciated.

For Treasurer, we have George Daly, W3QDQ. He says he won't try to pad the books to buy a new Cadillac since the gas is going up, but will settle for a Toyota. Future auditing committee beware of our silent numbers man.

For Executive Committee, we have Carl Brown, W3LUL, one of our most active two meter contest men. Other members of the Executive Committee who will serve the club for the next year, are Frank South, W3AIR just retired from APL with numerous patents. Now we know why W3AIR must have taken a lot of that to accomplish so much in such a short time. Ivon Blackman, K3LZX is creeping out from his illness to once again being an active member. We all missed Ivon and welcome him back. Norman Tavan, K3QDC is also another active member both in contests and helping the betterment of amateur radio.

For Trustees to FAR, W.C. Brown, W3HB, our very active two meter operator and contest man and G. Klink, W3AFV, who has helped many youngsters and oldsters alike to up-date their license or get onto the road of amateur radio.

That sums up our new officers for 1973-74. Let's all stand behind our elected men and give them our support.

WA3LPG

oo

# SHENANDOAH VALLEY RADIO CLUB

Meetings: 1st and 3rd Friday, 8:00 p.m.  
Club house, Grace Street, just off Paper Mill Road  
Two miles south of Winchester, Virginia

By the time this article is in print a lot will have happened in the Shenandoah Valley Amateur Radio Club. Dick Rush, W4HXB will have relinquished the president's chair along with the other current officers of the club.

Election of officers was held on April 20, with the following officers nominated and elected by club members present:

President: Lee Marshall, W4JK  
Vice Pres: Dick Rush, W4HXB  
Secretary: Tom Sperry, K4SUO  
Treasurer: Carl Horner, K4BRK  
Activities: Jack Robinson, WA4YRB  
Trustee: Jim Fishback, K4LLL

The club will again man the public address system for the Shenandoah Apple Blossom Festival at the Handley Bowl, headed by Dick Rush, W4HXB. A number of members volunteered their services. All members are urged to help with this project.

Neil Wood, W4LOG reports the code and theory classes are progressing nicely. Hopefully, we will have new hams in our community soon. K4BRK and W4LOG would appreciate any help the members can give.

Two new members were voted into the club:

Dick Wine, W4TGC  
Alex Yakulis, WB4GVT

Welcome to the club. Nice having you as members.

Plans are being made for Field Day in June.

W4LOG reported plans were progressing for the Hamfest, the first of August at the National Guard Armory. Watch for the ad in AUTO-CALL soon for details and prizes.

Visitors are always welcome at the regular meetings at the club house. Club Radio Frequency is 146.94 MHz - W4RKC.

73,

Tom, K4SUO

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## GUIDE TO AMATEUR SATELLITES

ARRL has just made available for distribution a convenient 32 page collection of information on amateur satellites. The pamphlet is made up of articles from QST, the ARRL Handbook and AMSAT Newsletters. For a free, unfolded copy by first class mail, send a self addressed envelope (larger than 6 x 9) with 16¢ postage to ARRL Headquarters.

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# T-MARC - Mid. Atlantic Repeater Council

Coordinator K3VJH, James G. Card (488-3432) P.O. Box 495 Silver Spring, Md. 20907	Dep. Coordinator Operations Howard D. Dunlop, WB4QAX (536-5641) 1208 N. Inglewood Street Arlington, Va. 22205
Dep. Coordinator Tech. Oper'n's K3GEG, John M. Cox (262-9640) 2113 Orangewood Lane Bowie, Maryland 20715	Dep. Coordinator Public Relations William M. Moran, W4MIB (938-6924) 109 Mill Street N.E. Vienna, Virginia 22180

## PERSONALITIES YOU SHOULD KNOW

Mike Cox, K3GES is TMARC Deputy Coordinator for Technical Operations and he is doing a good job. He monitors the operations of the many repeaters in the area. Mike, age 30, comes to us from Pittsburg, Pa., where he attended high school and Penn. Technical Institute. He was licensed at age 15 under his current call. Mike is employed as the District Service Manager for Maintenance by the Packard Instrument Company. Mike and his wife Patty have taken up residence in Bowie, Md. which incidentally is a very good location from which Mike can monitor the many repeaters. Mike has given many repeater users on-the-air technical assistance and particularly has assisted greatly with building and adjustment of frequency synthesizers. Look for Mike and don't hesitate to call for assistance.

## T-MARC PROJECTS YOU SHOULD KNOW ABOUT AND BECOME INVOLVED WITH

**WEDNESDAY EVENING REPEATER BROADCASTS:** Mark your calendar and listen, if you care to participate in any of the projects listed below, call any of the T-MARC coordinators.

**INTERFERENCE AND RADIO DIRECTION FINDING:** Each repeater should have a team of experts who can go into action on short notice.

**AUTOPATCH USE AND INTERFACE:** Who will design the first and best way for users to automatically test and adjust? Reduce on-the-air testing.

**INSTRUMENTATION:** An instrumented procedure and package is needed to automatically check off frequency operations, improper deviation, tones and hum. Take advantage of the generous offer to check your gear.

**COMPUTER UTILIZATION:** Watch the AUTO-CALL for a future article. This is a great area for administrative, technical and organizational efficiency.

**AREC/RACES:** Public interest, convenience and necessity dictate the terms. Watch the AUTO-CALL for a future article.

**MUTUAL ASSISTANCE:** For repeater technical design/control circuits.

**FREQUENCY COORDINATION:** Check with the area coordinator before you decide where to put your repeater.

**COMMERCIAL ASSOCIATED OPERATIONS:** Think twice before you make the comment or call. Avoid fringe violations. Send your opinions to the SCM.

**MESSAGE HANDLING AND REPEATER OPERATIONAL PROCEDURE:** Call CQ - use OVER. OUT means I'm gone, fellows.

W4MIB

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# VIENNA WIRELESS SOCIETY

Meetings: 2nd and 4th Fridays, 8:00 p.m.  
Vienna Community Center, 120 Cherry Street  
Vienna, Virginia

Training Classes now being concluded. For information on  
Advanced and Extra classes call Bill Moran at 938-6924  
Mailing address: P.O. Box 553; Vienna, Virginia

June is, of course, Field Day month, and judging from  
initial FD preparations, this year is going to be really big.  
All the activities will be recorded on movie film by Andy  
(not Worhol, but Cohn - K4ADL) to be shown at some later date.

The electronics code and theory classes currently being  
held Thursday evenings by the Vienna Wireless Society will  
shortly be concluded. The students are currently taking  
their license exams, and we hope to add 10 names to the list  
of area hams. We have a good group that has worked hard and  
we look forward to working them on the ether.

Bill Rubin would like to express thanks to Ken Anderson,  
Bob Bennett, Don O'Connor, Ken Coghill, Don Dunlap, Mike  
Vazquez, and all the others that have worked to make the  
classes a success.

Anyone interested in Advance and Extra classes can drop a  
card expressing their interests to Bill Moran, W4MIB or Bill  
Rubin, W4HPD. If we have enough interest, we will attempt  
to arrange something.

One of our most pleasant and informative meetings this  
year was our April get together with the WAYLARCS. Below



snapshot produced by Nilo Olin, WN4ZFI, club photographer.

# WASHINGTON AREA YL RADIO CLUB

Next Meeting: June 10 Family Picnic  
at QTH of K4LMB - Visitors welcome  
For more information call 536-8469

For club information: Call Liz Zandonini, W3CDQ at 363-7400

The "Joint Meeting" of WAYLARCS and Vienna Wireless Society was very enjoyable. We weren't prepared to be "the program" but Irene and the other girls present did a good job of improvising. We were pleased at the sincere interest expressed in the WAYLARCS and the number of pertinent questions that were asked. A number of YFs were present at the meeting and we sincerely hope that some of them will be joining with us in the near future.

Irene, W3RXJ will soon be mobile on 2 meters. Her OM, Frosty has bought her a 2 meter rig.

Maxine, WA4UWK has been getting up at 6 a.m. daily to QSO a class friend in Guam. Her mother has been visiting here with her recently.

Pat, LUL/3 has found a QTH where she can operate on weekends. She was very pleased with the responses she received from her ad for a QTH in the last AUTO-CALL.

Judy, a new member in the area (just back from duty in Germany) and her OM David are both working toward a ticket. Judy's father is W9PUT. He visited here recently and installed a rig for them. They hope to have tickets and be on the air by summer.

Ethel has been thoroughly enjoying a visit from her mother from Wenatchee, Washington. She is due to go back to "God's Country" before the end of May. The WAYLARCS were pleased to have a chance to visit with her at the last meeting. She was at one time, in 1960, licensed as WN3VHM.

At the April 28 meeting at the QTH of Ethel, the present officers were re-nominated to serve again for the coming year.

President: Meg Cauffield, W3UTR  
Vice Pres: Irene Akers, W3RXJ  
Secretary: Sandra Rutiser, K3SGX  
Treasurer: Maxine Harris, WA4UWK

Ethel put Liz on fone the other day and worked a G4 for her. This is the first phone for W3CDQ in 50 years! She went right back on the key, tho, - and worked FG7, HB9 and a WA7 - all with the indoor antenna strung in the attic.

Be sure to attend the WAYLARC Family Picnic on June 10 at the QTH of K4LMB. This is an "organized pot-luck" affair. Visitors are welcome and we are counting on some of the Vienna Wireless YFs and their OMs. Just pray for good weather.

73, Liz, W3CDQ

AUTO-CALL

June 1973

Page 33

## JUST BLAME MY PEPTIDES

Scientists at the Baylor College of Medicine have captured animals' memory in a test tube. Memory material was shown to be a substance called a peptide - a chain of amino acids. The information they carry depends on which of 20 amino acids they contain and on the sequence of the acids. For example, in working with brains from trained rats, they found that the memory of an electric cell proved to be a peptide made up of an eight-segment chain of six specific amino acids, basic chemicals of life. Further, the chemicals were isolated from the brains of the trained rats and injected into other untrained laboratory rats which then behaved as though they had been trained. Similar experiments were conducted with goldfish with comparable results but with different chemical properties involved.

This fantastic effort to crack the code of memory in the mind was reported by Dr. Georges Ungar and Dr. S.R. Burzynsky of Baylor at the 57th annual meeting of the Federation of American Societies for Experimental Biology. "None of these substances are directly applicable to human learning and memory," the scientists said, "but the important task at present is to identify a number of coded molecules so as to gain some insight into the rules of the code."



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## WANT ADS

WANT ADS are free to AUTO-CALL Subscribers for the first 50 words; thereafter cost is 2¢ per word. For non-subscribers the cost is a straight 2¢ per word. Ads are restricted to amateur radio associated items. Include full name and call (if any), address with zip code and telephone number with area code. Deadline is the 10th of the month preceding publication. Send ads to 2012 Rockingham, McLean, Va. 22101

**E STATE SALE:** HQ-180 HAMMERLUND Receiver - like new - \$225. COLLINS 32-V Transmitter - \$125. Code practice oscillator - \$3.00. HEATH SWR Bridge AM-2 - \$8. HEATH dummy load HN-31 - \$6. KNIGHT speech compressor Model C-577 - \$5. Surplus two meter converter - \$2. Lafayette Multi-tester TE-12 - \$8. OLSON S meter converter M-63, new - \$3. BUD RF monitor GX-79 - \$2. VIBROPLEX semiautomatic key - \$20.00 Straight key - \$1.00. RCK-N NATIONAL receiver, 200 to 800 Kc and 2.5 to 23.5 Mc - \$15 Several speakers - \$1 - \$5 Assorted relays - \$1.00 FOUNDATION FOR AMATEUR RADIO Widow's Assistance Program, Chairman Bill Parrott, W4URL; 8548 Georgetown Pike McLean, Virginia 22101. Phone (703) 893-8383 between 8 a.m. and 8 p.m. only.

**FOR SALE:** HOUSECLEANING VIKING VALIANT Xmtr - \$125. HALLICRAFTER SX-72 Rcvr - \$75 AR-22 ROTATOR, as is - \$15. HEATHKIT SCOPE O-5 - \$10.00 HEATHKIT VTVM V-1 - \$5.00 HEATHKIT Q MULT QF-1 - \$5.00 HYGAIN 5-band Traps 5BDK \$10 MOSLEY 10-15-20/40 traps TD-3TR - \$10. 8 Ft. Fiberglass whip w/spring mount & gutter clamp - \$10. BT-2 UHF-TV converter - \$7.50. GE 14" portable B/W Receiver - \$15. Bernie Swandic, W3IHY 7417 Mill Run Drive; Derwood, Md. 20855. (301) 869-1814

**REWARD** for information leading to recovery of equipment stolen from my car at Dayton, Ohio, 29 April 1973. YAESU FT-101 s/n82G12279/CW, 1.8 MHz & CW filter installed; REGENCY HR-2 s/n03-02030, xtals 147.00, 146.97/94/91/76/37/34/31/16 MHz; W4GF, Bill Grenfell; 7216 Valley crest Blvd; Annandale, Va. 22003. (703) 560-5229

**FOR SALE:** DRAKE TR-3, AC-3 RPC-3, Excellent cond - \$400 SWAN FM2X 2-meter transceiver with AC supply, 94/94, 52/52, 28/88, 07/67, 16/76. FB cond. - \$230. HEATH SB-200 linear, new finals, not a scratch - \$220. K3NXU, John LaMartina; 9118 Kilbride Rd. Baltimore, Md. 21236. Phone (301) 661-5588.

**FOR SALE:** Due to school. SIMPSON Model A, 8 watt, two meter transceiver, like new, Transmit 31, 34, 52, 94. Receive 52, 76, 91, 94. Independent switching; 30 W MOTOROLA Amplifier & supply as seen August '72 QST. All for \$250. Will negotiate. Marc A. Pressman, WB4DRB; 4519 N. 35th Street; Arlington, Va. 22207. (703) 538-6736.

**WANTED:** 18AVQ or 18 AVT Vertical. Advise condition and price wanted. Will you ship? Paul Friedel, W4AHN; Rt 3, Box 803; Myrtle Drive; Erwin, Tennessee 37650. Phone (615) 743-7382.

## FOR SALE

FOR SALE: HEATH DX-60 Xmtr. and matching HG-10B VFO - \$90. Also HALLCRAFTERS SX-122 receiver, general coverage plus bandspread for ham bands - \$150. Bob Peikin, WA3SXP; 8027 Eastern Avenue; Silver Spring, Maryland 20910. Phone (301) 585-7812

FOR SALE: HW22A, DC & AC supplies, mike and speaker, HUSTLER 40 Mtr. Ant. - \$165. GONSET II - 6 Mtr. receiver, needs some work - \$25.00 ARC-5 Xmtr 7-9 Mhz - \$7.00 R-322/AARN-18 Recvr - \$7.00 GONSET 100%'R Mod. Meter - \$5 HICKOK 670 5-inch scope \$30. HEATH AG-9A Audio Gen - \$12. 35 watt AM Xmtr 130-160 MHz and fixed freq. recvr - \$50. Robert C. Green, W3RZD; 3304 Collier Road; Adelphi, Md. 20783. (301) 937-6543

FOR SALE: Collectors items. CORNELL- DUBILIER Bulletin, the "CAPACITOR". 48 various copies from 1955 to 1961. Good condition - \$1.25 p.p. L.C. Hardy, W3QO; 522 Shirley Ave; Franklin Lakes, N.J. 07417. (201) 891-3998

FOR SALE: Fibreglass GEM Quad, boomless design, 2-el. 10,15 & 20 meters, spare arm. \$65. H. S. Corbin; 11704 Ibsen Drive; Rockville, Md. 20852. (301) 881-7571

FOR SALE: MOSLEY 10-15-20 meter vertical like new \$15 REALISTIC tube tester - \$5 Barry Kefauver, WB4OZJ; 9336 Boothe Street; Alexandria, Va. 22309. (703) 780-8224

HAVE some 85 back issues of AUTO-CALL. Need space. First \$8.00 to cover postage and handling takes 'em. Andy Clark, W4IYT; 41 Lenape Drive Miami Springs, Fla. 33166

FOR SALE: Complete 75 meter SSB station. HEATH HW12A transceiver with matching AC supply and mic. - \$125 firm Joe Graziano, K3FOI; 5100 Macon Road; Rockville, Md. 20852. Phone (301) 770-5236

WANTED: To copy and return schematic of OSBB/U scope. Gary Goodman, W4DCC; 8218 15th Place; Hyattsville, Md. 20783. (301) 434-1372

FOR SALE: CLEGG FM27B, new unit - \$400. In factory carton; REGENCY TMR 8H Hi-band scanner 8 channel - \$95. Stan Holden, W3QBK; 8302 15th Ave; Langley Park, Maryland; 20783. (301) 434-7656

FOR SALE: "73" Magazines from January 1971 to latest issue. In absolutely perfect condition. Also HEATH HM-15 SWR meter, perfect, never used. Best reasonable offer. Melvin Saltzberg; 9318 Edmonston Road; Greenbelt, Md. 20770. (301) 345-8412

FOR SALE: HUNTER BANDIT 2000C 2KW linear amplifier w/manual. Ex. cond. - \$250. GALAXY FM-210 FM Xcvr with AC-210 AC/DC power supply. Xmit xtals 94/34/22. Receive xtals 94/76/82 and Ringo two meter base antenna - \$150.00 Jim McGee, WA3MIO; 8402 Cowan Ave; Bowie, Md. 20715. Phone (301) 262-4526

MOTRAC MHF OWNERS: I need 52/52 high side crystals, will trade Motorola 16/76 or 94/94 for your Motorola 52 simplex. Perfect NCS-3 with AC power supply and speaker cabinet, absolutely mint. No scratches - \$200. K3RUQ, Tim Meekins; P.O. Box 805; Cambridge, Md. 21613. Phone (301) 228-8534

WANT ADS

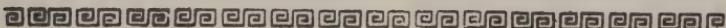
FOR SALE: TA-33JR MOSLEY 3-element Tri-Band Beam - \$35. Brand new RG-11U coax 8¢ per foot in 100 foot lengths or \$60 for 1,000 feet. EICO 425, 5" Oscilloscope - \$30. HICKOK Mutual Conductance tube tester - \$50. Antenna Specialists M-117 Super-Magnum Citizens-Band vertical, brand new, in unopened box - \$15. Frank C. Dahm; 2262 Windbreak Drive; Apt. 202 Alexandria, Va. 22306. Phone (703) 765-0012

FOR SALE: BC221 Freq. Meter with AC power supply - \$25. GE ST4A sweep generator 4 to 220 MHz - \$40. HP 524B Counter - \$200. -BUD scoping panel cabinet C-1557 - \$10. Cabinet similar to Bud C1441 - \$5. Gary Goodman, W4DCC; 8218 15th Place; Hyattsville, Md. 20783. (301) 434-1372

FOR SALE: SBE Model 34 Transceiver with 12 volt DC and 115 volt AC power cords and microphone - \$225.00 Home brew linear, 80 to 10 meters \$45. DC pwr. supply and battery charger - \$5. Plate modulator (was used to modulate a 2E26 on two meters) - \$10. Allan R. Brown, W4GZR; 210 E Fairfax St., Apt 520; Falls Church Va. 22046. (703) 532-1308

FOR SALE: RME 4350 Receiver, 160-10 Meters. With new SWAN two speed dial. Exc. cond., with manual and speaker - \$75. Home brew 160 meter converter - May 1969 QST - \$15.00

WANT: RANGER I or Navigator NEED Collins filter 455J21. Will swap 455J05 or 455J31. Floyd Sense, K4EQA; 808 Palmetto Drive; Cary, N.C. 27511. (919) 467-7829



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## WANT ADS

**FOR SALE:** INOUYE IC-20 Exec. cond; all 12 channels xtaled 1W/10W output; has connector for T.T. pad - \$250 firm. TR-22 excellent condition all 6 channels xtaled; w/NEW N.B. filter - \$175 firm. WHITE T.T. handset, NOT modified - \$15. firm. DYCOM 500E Brick Booster; 1W in / 20W out - \$50 firm. MOTOROLA T41GGV 6FM Mobile (12V) with Trac head & mic & spkr; channeled on WA3BMM. Repeater & Simplex; complete w/antenna - \$75. or best offer. MILLEN 90932 80-6 Mtr tunable Xmit monitor scope - \$50.00 IRAKE TR-4/C SSB Xcvr; NEW, excellent condition; less than 10 hours use - \$550.00 firm. Ralph Delligatti; K3CMY; 10906 Bucknell Drive; Silver Spring, Md. 20902. Phone (301) 942-8822, 7-10 p.m. weekdays.

**WANTED:** Bugs and straight keys for collection. Give make, model, condition, price John Elwood, W7GAQ/6; Box 1243; Lancaster, Calif 93534 Phone (805) 946-2028

**FOR SALE:** 28R0, floor stand, base, motor, 3-speed shift. **WANTED:** 28ASR - shift; Waters ant. switch. W3 for COLLINS 312B-4,5. David Mello, 1444 Westway; Arnold, Md. 21012. Phone (301) 757-4913

**FOR SALE:** Used TA-36 Tri-Band beam - \$75.00. W3LJF Milford Gossard; RFD 8, Box 55; Frederick, Md. 21701 Phone (301) 473-7900

**FOR SALE:** JOHNSON ADVENTURER (50 watt CW, 80-10, 115 volt, excellent condition) - \$30. SCR-522 and supply, very good condition - \$30.00 GLOBE SCOUT Deluxe xmitter (60 W AM & 90 W CW, 80-6 115 V, needs minor work) - \$18 HEATH VF-1 VRO - \$15. RME VHF-152 converter (10, 6 2 meters - output on 7 MHz, 115 V) - \$15. Navy Receiver, CAY-46076-A (200-2000 kHz, 4 bands, with supply, mint condition) - \$30. ELMAC A-54 Transmitter (80, 75, 40, 10 AM-CW, with supply) \$25.00. LAVOIE Microwave frequency meter Model 105-SM (375-725 MHz, excellent condition) \$50. Signal Corps Signal Generator I-198-A (7-15 MHz, excellent condition) - \$30. Test Set AN/URM-9 (portable sig. gen. field strength meter, volt-ammeter, ammeter, crystal activity checker, audio level indicator - with manuals, excellent condition) - \$35. Assorted relays - list available. Paul Elliott, WA3KTD; 902 Lynvue Road; Linthicum, Md. 21090. (301) 636-0564

## ROANOKE DIVISION CONVENTION

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Roanoke Division Convention, Box 7388, Warrenton, Va. 22186

## WANT ADS

**FOR SALE:** HALICRAFTERS SR-160, 150 watt Transceiver, mobile power supply, 20-40-80 meter Hustler antenna w/mount, mike, speaker. Bill Risley, K4RAO; 5514 Ferndale Street, North Springfield, Va. 22151 Phone (703) 941-4740

**FOR SALE:** B & W #361 CODAX automatic keyer, factory unopened carton - \$58.00 COLLINS 351D2 mobile mount for KWM-2, factory carton, unused, complete with all cables - \$75. Portable steel tape reel doublet. 80 meters to 10 meters, calibrated fully, sets up in 5 minutes, with 50 feet RG58U - \$40.00 NCX-3 transceiver with matching power supply - \$175.00 John Elrod, W3NVC; 10933 Riverview Road; Fort Washington, Maryland 20022. Phone (301) 292-3286.

**FOR SALE:** HW-22A and HP-23 \$130. HW11 VSWR Meter - \$5. Ball mount and spring for whip - \$5. Extra spring for whip - \$2. 7-9 Mhz ARC-5 Xmt - \$7.50. 3-6 Mhz ARC-5 Receiver - \$5. R. Fisher, K3LLR; 8113 Turner Street Oxon Hill, Maryland 20022. Phone (301) 567-3486

**NOVICES:** HEATHKIT MT-1 AM/CW transmitter, up to 100 watts, all bands with solid state AC power supply - \$30 or best offer. Bob Spidell, W4EZW; 4529 Evansdale Road; Woodbridge, Virginia 22191. Phone (703) 670-5096

**FOR SALE:** NATIONAL NCL-2000 Linear amplifier - 2KW PEP New tubes in January, 1973. \$320. Dave Blanchard, W3FCS; 3142 Jeffrey Road; Baltimore, Md. 21207. (301) 265-7537

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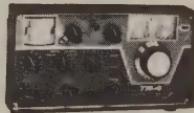
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## WANT ADS

**FOR SALE:** HEATH - Novice CW Transceiver, HW-16; mint condition - \$75. HEATH electronic keyer HD-10 - \$25. Lee F. Neeley, W6MNN/4; 9552 Covington Place, Manassas, Va. 22110. (703) 368-2831

**FOR SALE:** ROSS & WHITE (KYOKUTO ENSHI) 2 meter xcvr, mobile mount, manuals, 12VDC with 34/94, 94/94, 31/91, and 88 receive all set with counter, 12 channels, power selection of .1W, 1W, 10W; Good condition - \$150.00 Elmer Zborofsky, WB4IGW; 5912 Brookview Dr; Alexandria Va. 22310. (703) 971-3625

**WANTED:** 220 MHz contacts or information on 220 activity in the MD/DC/VA area. J.G. Oehlenschlager; 3900 Desoto Court; Woodbridge, Va. 22191. Phone (703) 670-2781

**WANTED:** Director for TA-33 Michael Lombardo, W3FAE; 6 Carrolllyn Dr.; Westminster, Md. 21157. (301) 848-5188

**FOR SALE:** AMPEX cassette tape recorder. New - \$30.00 Bryan F. West, WB4IRC; 906 Turkey Run Road; McLean, Va. 22101. (703) 356-3103

**FOR SALE:** Cantenna Dummy load, 500 watts capacity with coax fitting SO239. Oil cooled - \$10. DOW Key-change-over relay. Like new - \$10. Dummy load Ohmite D100 with RF ammeter, coax fitting \$20 Pi network with ant. current indicator - \$15. Mobile Hustler antenna with 40 and 20 resonators and mount - \$10 for the works, including mast. John Elrod, W3NVD; 10933 Riverview Road; Silesia, Md. 20022. Phone (301) 292-3286.

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WANT ADS

SUPER SALE CONTINUED!

Did you get to see the ad in the May issue of Auto-Call? Take another look at page 43. W4AAU is selling everything. Lots of gear still available. Could not list all the stuff in the ad so here is more: PROP PITCH rotor - \$50.00 VARIACS, new, used, different sizes - \$5.00 - \$30.00 POWER LINE STABILIZERS, 60 watt - \$15, 120 watt - \$20. QST collection, 40's thru '72, many CQ, 73, Ham Radio, VHF Horizons, all for \$60. MOTOROLA Walki-Talki P33-4/NU-105 untouched - \$38.00 MOTOROLA SENSICON/30W with 110 volt, frequency coil, extra filter, and 2 GE tone decoders and manual - \$55. HP-202J - \$425. VY BIG 50 MHz KW Linear - even though the linear uses four 4CX250B, sockets, chimneys, filament xformers, blower, 11 position metering, the power supply is worth \$\$\$ by itself. Pair 872 in HV, BIG choke and caps, screen and grid supplies are com. mfg. using pairs of 6146 and elec. regulated. The rack includes engraved panels and is fully metered. Included are four spare 872's, 6146's, choke & caps. Very loud for \$318.00 HI-FI STUFF, OKI Stereo tape, amplifier, speakers, and matched mikes, cables - \$147. Weathers turntable/Empire - \$49. PANASONIC AM/FM MPX, speakers, and KOSS headset, all brand new - \$79.00 Printing adding machine - \$25. Those that came already have not been disappointed. MANY BARGAINS! SEE MAY AUTO-CALL Page 43. Write to W4AAU, Tony Carbone; Box 131A, Bluemont, Virginia 22012. or call (703) 554-8285.

FREE \* FREE \* FREE. You owe it to yourself if you are a repeater sponsor or user to seek out information on The Middle Atlantic Repeater Council, T-MARC. For info. on how to join in the new adventure in Ham Radio, send SASE to T-MARC, PO Box 497; Silver Spring, Maryland 20907

WANTED: DRAKE MC-4 Mobile console and DC-4, 12 volt DC power supply. WA3URA, Jerald Peterson; 610 Third Street S.E.; Washington, D.C. 20003 Phone (202) 547-9260

FOR SALE: HEATH Remote control for HEATH Models GRA-227-6, GRA-285-6, GRA-681-6 - \$25. NTS Color TV course - \$35. Prices FOB Lesley Williams, WB9FBJ; Star Route, Box 109B; Townsend, Wisconsin 54175. (no phone)

FOR SALE: Complete station. All in excellent condition with manuals. HEATH TX-1 Apache transmitter - \$70.00 HEATH HA-10 1 KW linear \$145 HALLICRAFTERS SX-96 - \$75.00 HYGAIN TA-33 (Sr.) - \$60.00 Larry Allen, W3GUN; 8915 Sudbury Road; Silver Spring; Md. 20901. (301) 585-5998

FOR SALE: HQ-170C, manual, carton, very good condition - \$155. Michael Lombardo, W3FAE, 6 Carrolllyn Dr., Westminster, Md. 21157. (301) 848-5188

FOR SALE OR TRADE toward late scope: HEATH IG 102 Signal Generator (new) - \$25. SWR Meter HM-11 - \$15.00 300 feet armored 75 ohm coax - \$15. Miscellaneous books, callbooks and magazines. Larry Briggs, W3MSN; 5108 Boulder Drive; Oxon Hill, Md. 20021. (301) 894-3977

WANT ADS

FOR SALE: TR-22 with DYCOMM SUPER "E" Amplifier, 40 watts, six channels 61/61; 28/88, 31/91, 16/76, 94/94, 34/94, 5/8 wave HyGain Antenna, magnetic mount plus all coax and power cables. Excellent condition. WA3QGA, Al Sines; 11302 Stephen Lane; Beltsville, Maryland 20705 Phone (301) 937-7466

WANTED: COLLINS dummy load and 312 B-4. John Elrod, WN3NVD: 10933 Riverview Road; Fort Washington, Md. 20022 Phone (301) 292-3286

FOR SALE: HEATHKIT SB-310 Receiver. Ham bands 80 thru 15 meters and five shortwave broadcast bands. CW filter. Circuit same as the SB-301. John Beckman, K6CPS; 7380 Hallcrest Drive; McLean, Va. 22101. Phone (703) 356-3880.

FOR SALE: SX-100 dual conversion, complete coverage, selectable sideband receiver with R-46 speaker. Excellent - \$85. George Daly, W3QDQ; 108 Southwood Avenue; Silver Spring, Md. 20901. Phone (301) 593-6497

FOR SALE: DIPLOMAT 2 Antenna - \$7.50; Brand new HUSTLER 40 Meter resonator - \$10.50 C.E. Spitz, W4API; 1420 S. Randolph Street; Arlington, Va. 22204. (703) 920-4665.

FOR SALE: Most of GEM Quad 4 full arms, 4 dividers, aluminum spider, all clamps and balun coil assembly plus full instructions - \$25 FOB You will need 4 full arms plus copper wire. W4AHH; Paul Friedel; Rt. 3, Box 803; Erwin, Tennessee 37650. Phone (615) 743-7392.

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## Patronize Your Fellow Hams

Classified Ads - For Commercial and non-amateur type advertising cost 50¢ per line per issue. Each Ad must contain full name, call, address and telephone number - with area code. Deadline for copy is the 10th of the month preceding publication. Checks should be made payable to the Foundation For Amateur Radio.

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**BIRD FEEDERS & HOUSES:** Pre-cut redwood kits, hand crafted, easily assembled. \$3.95 & \$4.95 postpaid. (Ideal Gifts). Send for FREE information. W3HPO "KEEP THEM FLYING" P.O. Box 4453, Silver Spring, Md. 20904. Phone (301) 774-9363.

**BOOKS WANTED.** Want the following books:

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BC Antennas	Smith	Electromag. Radn.	Jordan
Also unbroken PIRE '24-'37, & AIEE 1924 - final. Some PGANE ICC-71	W3AFM, 5800 Hillburne, Chevy Chase, Md. 20015.	(301) 654-7669	

**ELECTROLUX** Sales and Service - Call Bryan Greene, W3CQE; Box 134; Brentwood, Maryland. Phone (301) 277-6710

**ELECTRONIC ASSEMBLY:** Kits built, aligned and tested - 15% of kit price. Specialized electronic assembly at reasonable rates. Professional quality work. Norene and Gary Poorman, W4UPJ; 1114 South Dickenson Avenue; Sterling, Virginia. Phone (703) 471-5592

**FREE FURNITURE** for the ham shack. Pullman sofa and easy chair. You haul. Arthur Sullivan, K3BQZ, 7237 Garland Avenue, Takoma Park, Maryland 20012. (301) 270-8706.

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**LOOKING FOR GEAR?** Have some to sell or trade? Try HOBBY SWAP AND SHOP where hams find what they want. We sell your gear for you. Congressional Plaza; Rockville, Md. (301) 881-9546

**NEWS-NEWS-NEWS** - "WORLD RADIO," Amateur Radio's Newspaper. Trial subscription, two issues for one dollar. "WORLD RADIO" 2509-D, Donner Way, Sacramento, California 95818

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## CLASSIFIED ADS cont'd

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6953 Wisconsin Ave., Bethesda, Md. 20015. (301) 656-7373

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RADIO TRAINING COURSES: Code, theory, teletype, for amateur or commercial license. Evening classes 7 - 10 p.m. W3CVE  
INSTITUTE OF RADIO COMMUNICATIONS, 8416 Georgia Avenue,  
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Hundreds of others available. Sam Consalvo, W3IHD;  
7218 Roanne Drive, Washington, D.C. 20021. (301) 248-4148

WANTED: Some assistance in setting up radio station from ham who is familiar with SX-117 and HF-44 equipment. Location in Laurel area. Phone John Leis, WN3ULB at (301) 725-3976 or 574-6776.

WOULD YOU LIKE to swap ham shacks with a WV4 in the Virgin Islands? Comfortable one bedroom apartment with 3-band Quad, 18 AVQ vertical and 40 meter dipole. Consider including Drake line. Exchange quarters in the D.C. area, preferably in Georgetown. Write AUTO-CALL Box V for particulars.

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